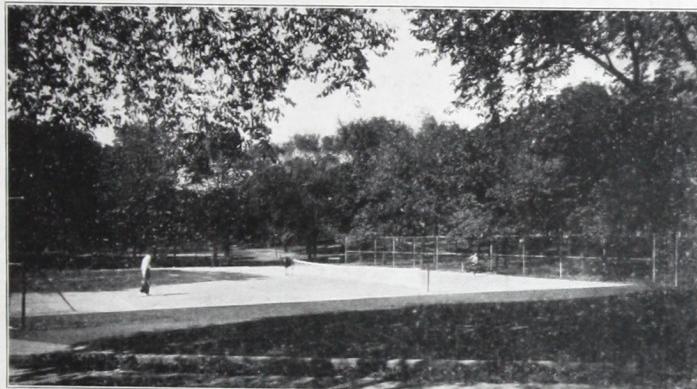


Tennis Every Day on Concrete Courts



"Concrete for Permanence"

Published by
Portland Cement Association

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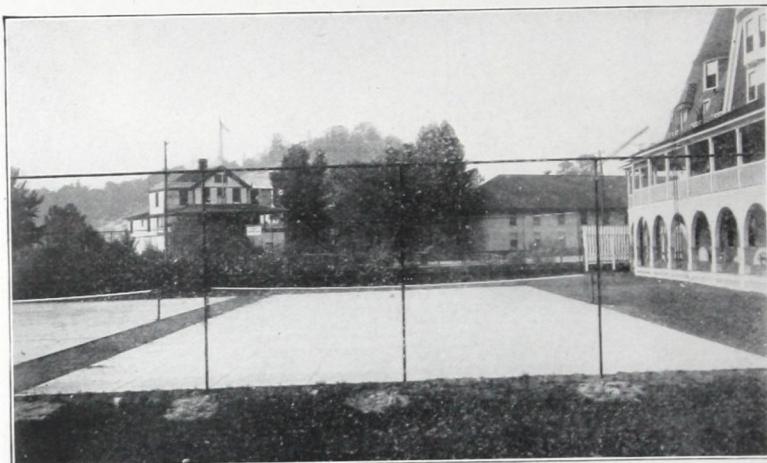
MARCH, 1917

Tennis Every Day on Concrete Courts

ADVANTAGES OF CONCRETE TENNIS COURTS

How many times last year were you prevented from playing your favorite game while waiting for a clay or turf court to get in suitable condition after rain? Were you able to play on Christmas Day?

How would the possibility of tennis every day appeal to you? It is more than a possibility if you have a concrete tennis court. Tennis every day is then a reality. A light shower may prevent play for an afternoon or even a day or more by putting the earth or turf court



This concrete tennis court is at the Hotel Ottawa, Ottawa Beach, Mich. The manager says: "Our guests much prefer this to the clay courts."

out of commission. You cannot play on such a court early in the spring nor late in the fall. Besides, if the season happens to be an unusually rainy one, you will be kept from playing your favorite game many times.

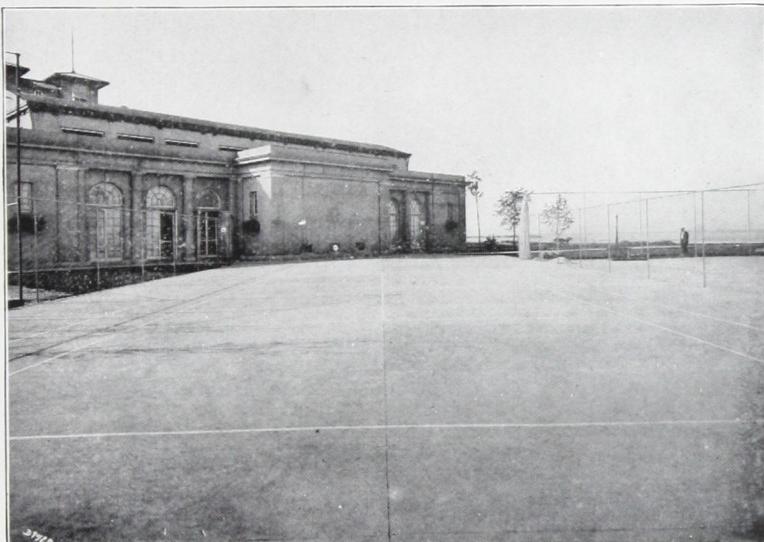
These are not the only objections to turf or earth courts. It costs a great deal of money to keep such courts in good condition for play. Concrete tennis courts are not affected by rain. The surface drains so quickly that play can be resumed ten minutes or so after a shower. Concrete tennis courts cannot be marred by players' shoes, nor are they affected by frost or heat. There is no possibility of a dislodged pebble or other surface irregularity changing the expected nature and direction of bound. This insures faster and more accurate play.

C O N C R E T E T E N N I S C O U R T S

Foothold on the properly finished concrete court is certain because of the dependable surface.

CONCRETE COURTS ARE ECONOMICAL

A concrete court will cost more to build than will one of turf or clay, but it is always in condition and costs nothing for upkeep. There is no rolling, no grass to cut; there need be no painting of court lines, because you can, if you so desire, inlay these lines with a white cement mortar when the court is built. But if you do not permanently mark court lines in this way, the only maintenance a concrete court



Concrete tennis court at South Shore Country Club, Chicago. The surface of this court was ground down by using a rotary floor polishing machine and has been illuminated at night for tennis play and for dancing. At other times, the surface is used for parking automobiles.

will require is the painting of court lines probably not more than once a season.

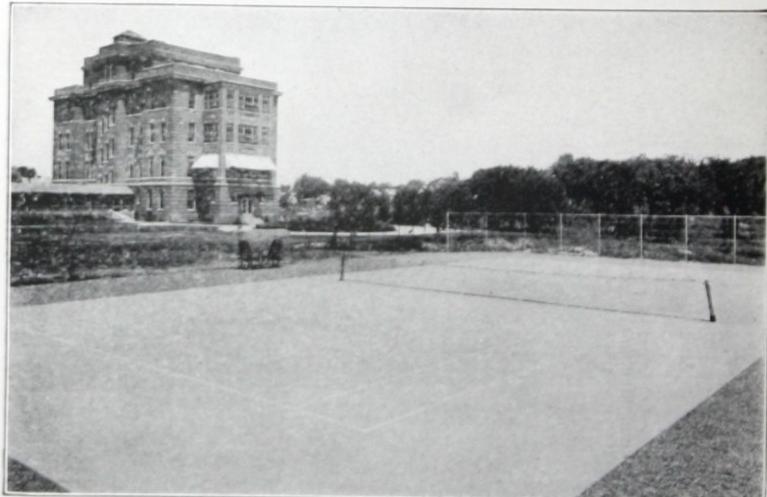
OBJECTIONS ARE ONLY FANCED ONES

Some people imagine there are objections to the concrete court. It occurs to them that the concrete surface will be hard to play upon; that players will tire sooner than on a surface such as turf or clay. You remember that the same objections were advanced against concrete

C O N C R E T E T E N N I S C O U R T S



A private concrete tennis court at Jackson, Mich.

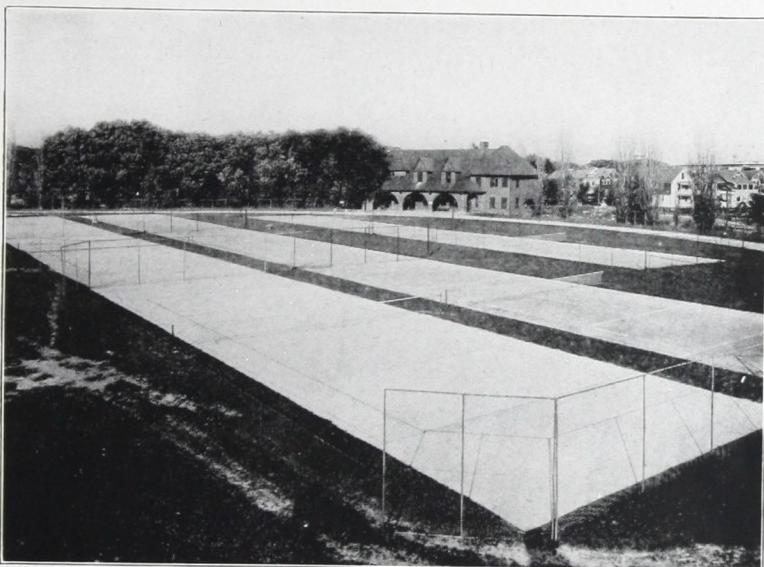


Concrete tennis court connected with one of the
Albany (N. Y.) hospitals.

C O N C R E T E T E N N I S C O U R T S

sidewalks. Now wood, earth, and cinder walks have been replaced by concrete. Concrete streets and roads were once opposed because of the fancied notion that the unyielding surface would lame horses; but this has long since been disproved.

One who plays only once on a concrete court might prefer the commoner types; but many players who are used to concrete courts have only praise for them. They prefer them because of the fast



In the foreground of this picture are three concrete tennis courts at the athletic field of the Y. M. C. A., in Ridgefield Park, Albany, N. Y. The General Secretary says: "We found we could play tennis a great many times when it was impossible to get the clay courts in condition. We also found that the balls bounced accurately and that the players were more sure of their footing."

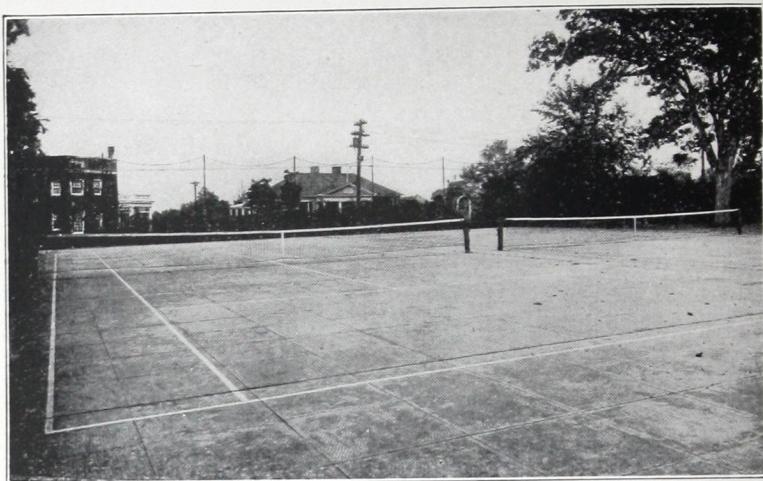
The courts in the background are clay courts.

game that such courts make possible. The hard surface is no drawback. The almost unanimous opinion of persons who play regularly on concrete courts supports this statement. The surface, while smooth, is not slippery. Besides, players wear rubber-soled or similar shoes that prevent slipping.

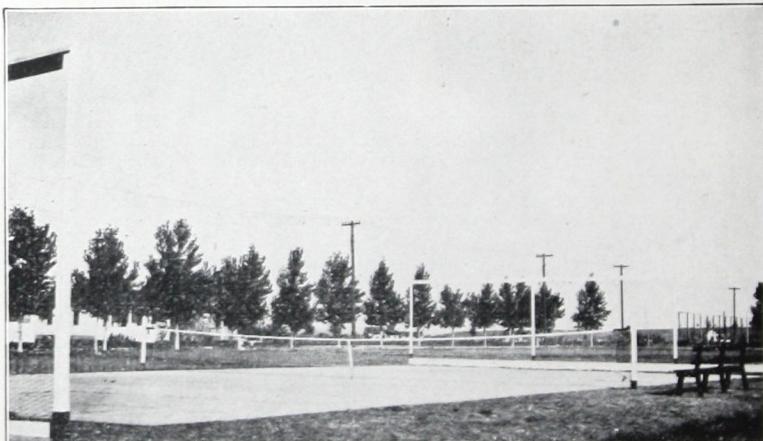
WHAT OTHERS SAY ABOUT CONCRETE TENNIS COURTS

During 1916, many concrete tennis courts were built in various parts of the country, more perhaps than in all previous years. Prac-

CONCRETE TENNIS COURTS



This concrete tennis court is owned and used by the Chevy Chase Club,
Chevy Chase, Md.



A concrete tennis court at the Dawson County high school,
Glendive, Mont.

CONCRETE TENNIS COURTS

tically all of the illustrations shown in this booklet are of courts built during that year. There were many others.

Letters reproduced in this booklet will tell you what some people whose opinion is worth having, think of concrete tennis courts.



ADDRESS ALL COMMUNICATIONS TO THE
"UNITED STATES ORDNANCE COMPANY"

TELEPHONE, MAIN 1735.
CABLE ADDRESS "ORDUS."

NATIONAL METROPOLITAN BANK BUILDING

WASHINGTON, D.C.

Sept. 30, 1916.

Portland Cement Association,
111 West Washington Street,
Chicago, Ill.

Gentlemen:

Referring to your letter of the 19th (file 9-13-13):

1. About a year ago we constructed a cement tennis court and a cement practice wall at the Columbia Country Club, where we had 12 clay courts. The wall was erected by Colburn Bros. and the court was constructed by the Cranford Paving Co., both of this city.

2. The practice wall has proven very popular at all seasons, and the cement court has been in constant use at periods when the clay courts were too wet for play. Our members all prefer the clay courts when they are in condition, but we have found the cement court a most necessary addition to our tennis equipment and could not now get along without it.

3. I will be glad to send you photographs of the cement court and practice wall. The court was constructed under the supervision of Mr. Percy Cranford, a member of our Club, who made us a special price, which I am not at liberty to disclose; but have no objection whatever to Mr. Cranford giving you this information if he so desires. The practice wall is about 4 inches thick, 11 feet high and 50 feet in length, of reinforced concrete. It cost us about \$200.00.

Yours very truly,

Chairman Tennis Committee,
Columbia Country Club.

AYL/BS

The concrete court is a great favorite in public parks and at summer hotels. Clay or turf courts are seldom properly maintained. Players will go on them when they are not really fit for play, thus doing the surface considerable damage.

C O N C R E T E T E N N I S C O U R T S

TELEPHONE RANDOLPH 5038

JAMES J. FORSTALL
ATTORNEY AND COUNSELOR AT LAW
1023 HOME INSURANCE BUILDING
137 SOUTH LA SALLE STREET
CHICAGO

August 24, 1916.

Portland Cement Association,

Chicago, Illinois.

Dear Sirs:

As you probably know, the Chicago Tennis Club has recently installed two concrete tennis courts, being the first club in Chicago to do so. Although they have been in use only a short time, they have already made a great "hit", and I feel that they are going to be the most popular of all the courts at the Club.

There is no doubt that the installation of these concrete courts of ours, followed, as they certainly will be, by many other such courts in this city, will mean a great deal for tennis in Chicago.

For, as a practical matter, the concrete court, and particularly the electric-lighted concrete court - one of ours is now equipped with electric lights - is far and away the best court that has yet been produced. It offers facilities for day and night play at all seasons, in striking contrast to the turf or clay court. Its playing surface always level, bounces always fast and true, it eliminates the element of luck and tends to develop the most highly skilled game - a truth which has been convincingly proved in recent years by the wonderful records of so many California players.

In addition, there is the fact that a concrete court requires neither care nor expense to maintain, and that play on it is entirely free from the dirt and grit which affects eyes, clothes, rackets and balls, in the case of clay or stonedust courts.

I feel strongly that any efforts you make to encourage the installation of concrete courts will be of very great benefit to the game of lawn tennis in this country.

Yours very truly,
James J. Forstell
Director, Chicago Tennis Club.

C O N C R E T E T E N N I S C O U R T S

ESSENTIALS OF CONSTRUCTION

In paving an area for a concrete court, a sufficient width outside of court lines should be concreted so that players need not run off the court. A minimum of 11 feet on the ends and 9 feet 6 inches on the sides is recommended. It would be better, where professional play is expected, to make the side limit 12 feet and the back 20 feet.

JOHN T. D. BLACKBURN, PRESIDENT

ALONZO P. ADAMS, JR., TREASURER

WILLIAM J. DAIVISON, GENERAL SECRETARY

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Jan. 11th, 1917.

Mr. Paul Cerruti,
263 Northern Boulevard,
Albany, N. Y.

My dear Mr. Cerruti:

It gives me pleasure to say that the three concrete tennis courts you built for us last summer proved entirely satisfactory. We found we could play tennis a great many times when it was impossible to get the clay courts in condition. We also found that the balls bounced accurately and that the players were more sure of their footing. They are standing up all right through the winter thus far. I believe it would be the policy of every tennis club to have at least a part of their equipment built of concrete.

On behalf of the Association I wish to thank you for the splendid job you did for us.

Yours truly,

W. J. Dawson

General Secretary.

As mentioned, court lines can be painted on the concrete or formed by leaving channels in the surface to be filled later with a white cement mortar. If the first method is used, a priming coat of a white paint, specially prepared for use on a concrete surface, followed later by a second application, gives best results. Court lines so fixed should be painted each season. It is sometimes desirable to slightly darken the concrete surface by adding a little mineral coloring matter to the

CONCRETE TENNIS COURTS

mortar used for the top course. One-half pound of carbon black per sack of cement, gives a suitable gray shade. Brown and reddish tints may be obtained by using natural colored silica sands or iron oxide in the top course.

The court surface must be finished with great care. It should be entirely free from waves and other irregularities. After being wood

ADDRESS COMMUNICATIONS AND MAKE CHEQUES PAYABLE TO THE SOUTH SHORE COUNTRY CLUB

SOUTH SHORE COUNTRY CLUB

CHICAGO

Oct. 7th, 1916

Mr. C. M. Wood,
Cement Production Bureau,
111 West Washington St.,
Chicago, Ills.

Dear Sir:

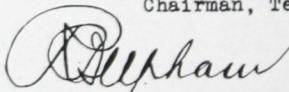
Your communication of September 29th, to Mr. Stacy Mosser, Secretary, has been handed to me for reply.

The concrete tennis court which we recently installed has been very popular with our members and the expression of opinion from them has been favorable in every instance. We installed lights to illuminate the court at night for playing and dancing and for the latter purpose it has made a great hit. In fact, we could not get along without it.

Very truly yours,

RBU/H

Chairman, Tennis Committee.



floated, the surface should be gone over lightly with a steel trowel so as to make it fairly smooth. Care should be taken not to overtrowel. It is recommended that for quick drainage the court surface be sloped from side line to side line, not to exceed 2 inches in 60 feet.

Construction principles are very similar to those that must be observed in good concrete sidewalk or pavement practice. The Port-

C O N C R E T E T E N N I S C O U R T S

land Cement Association will be glad to supply suggested specifications for concrete tennis courts and a working drawing showing court layout and other details to persons interested.



MULTNOMAH
AMATEUR ATHLETIC
CLUB

PORLAND, OREGON

September 8, 1916.

Mr. C.M.Wood, Manager,
Cement Products Bureau,
111 West Washington Street,
Chicago, Illinois.

Dear Sir:

Your inquiry as to how we are pleased with our concrete tennis courts is at hand and in reply will say we have six hard surface courts which have constant use, four being asphalt and two concrete, the latter having been constructed about four years ago, and subsequent to the asphalt courts. The concrete courts are favored by the majority of our players and are very satisfactory, and a source of no expense for upkeep.

In my opinion, the principal factors in a satisfactory concrete court are the surface finish, which should be neither rough enough to wear out balls and shoes or so smooth as to be slippery, and the addition of lamp black or some other coloring matter to the mixture to modify the natural color of the concrete.

Yours truly,

ABMc-H.

Chairman, Tennis Committee.

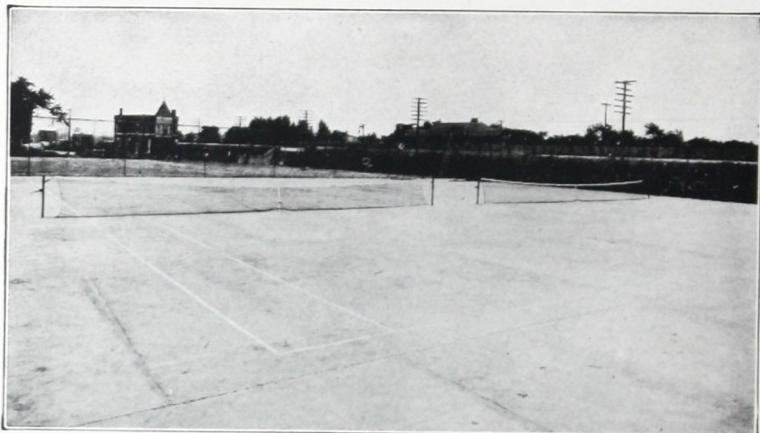
The following summarizes the essentials of good workmanship:

The foundation for the court must be brought to proper height and firmly and uniformly compacted. If natural drainage is poor, a subbase at least 6 inches thick of suitable material such as cinders, should be placed and well tamped. Consistency of concrete for the

C O N C R E T E T E N N I S C O U R T S

3-inch base should be such that the mixture will show free water on the surface when lightly tamped in place. The concrete should be composed 1 sack of portland cement, $2\frac{1}{2}$ cubic feet of clean, coarse sand and 4 cubic feet of clean pebbles or broken stone, ranging in size from $\frac{1}{4}$ to $1\frac{1}{2}$ inches.

Concrete should be machine mixed if possible, although it may be mixed by hand if thoroughly done. Machine mixing is, however, preferable. Concrete should be placed as quickly as possible after mixed, and should be deposited continuously for each individual section or slab of the court, to the required depth and width. No



A view of the two finished concrete courts at the Chicago Tennis Club. The director of this club says: "It offers facilities for day and night play at all seasons in striking contrast to the turf or clay court." These courts were so built that the surface could be flooded for freezing, thus providing for ice skating.

fractional sections should be allowed. A joint should be made at the net line by inserting a strip of tarred felt $\frac{1}{2}$ inch thick and $4\frac{1}{2}$ inches wide. Slabs should be reinforced with wire fabric placed lengthwise of the court sections. Reinforcement must be placed upon and pressed into the concrete base immediately after the base is placed. It must not cross joints; and where necessary to lap reinforcement, such laps should be 4 inches.

Immediately after the concrete for the base and reinforcing have been placed, the mortar for the wearing course must be deposited. Mortar for this should be mixed in the proportions of 1 sack of port-

C O N C R E T E T E N N I S C O U R T S

land cement to 2 cubic feet of clean, well graded sand and only so much water as will give the stiffest consistency possible to work with a

Ottawa Beach, Mich. July 22, 1916.

Portland Cement Association,

Chicago, Ill.

Gentlemen:-

In reply to your kind favor of the 20th. regarding our concrete tennis courts. We are pleased to say we have found this form of court very much superior to any other form of construction we have used and should we build any new courts we would certainly use concrete. We now have three concrete courts, just having finished two new ones. Our first concrete court was constructed about three years ago and has been constantly in use as our guests much prefer this to the clay courts and are very high in their praises of same. While the original cost of construction is a little high you have a court that will last a lifetime and on the other hand you have no upkeep expense as you have with other courts.

We are enclosing the photos as per your request.

Thanking you very much for your compliments, we are

Yours very truly,

Hotel Ottawa

S : E

*Chas. H. Seelbach
mgr.*

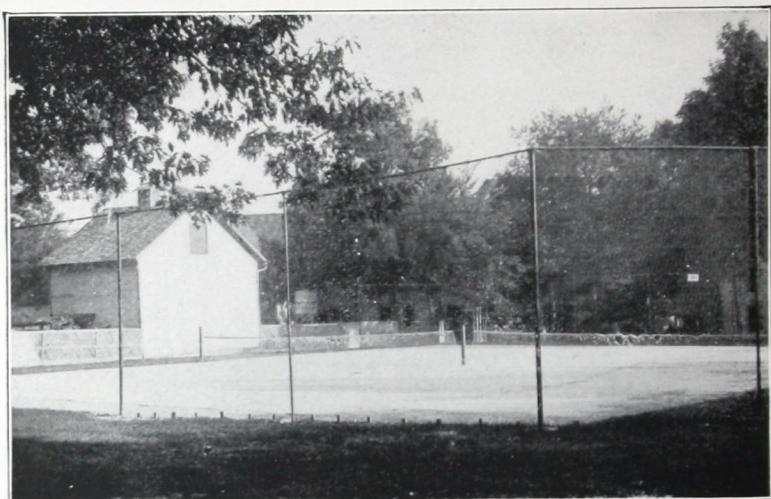
sawing motion of the strikeboard. After the wearing course has been brought to the established grade by means of a strikeboard, it must be worked with a wood float in such a manner as to thoroughly compact

CONCRETE TENNIS COURTS

it and produce a surface having no depressions or inequalities of any kind. Then the surface should be gone over lightly with a steel trowel.

If artificial coloring is used to vary the natural tint of the concrete, such coloring matter should not exceed in amount, 5 per cent of the weight of the cement.

As soon as each slab or section of the court has hardened sufficiently to prevent damage from applying a covering of at least 1 inch of wet sand or 2 inches of wet sawdust, such a protective covering should be



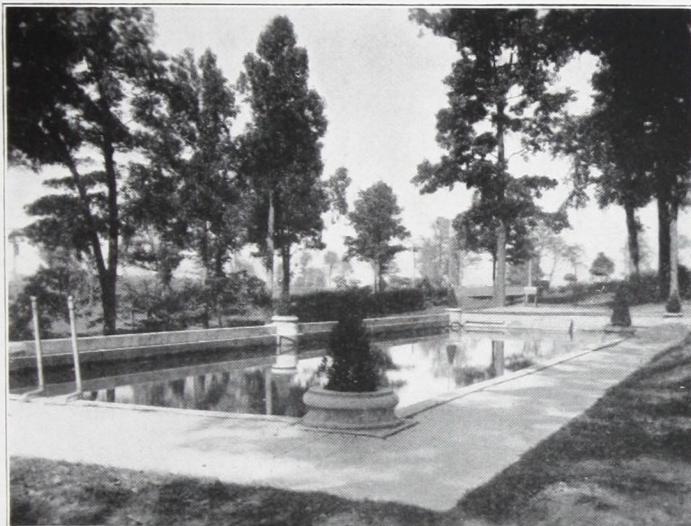
A private concrete tennis court at Delavan, Wis.

applied. It should also be kept wet by frequent sprinkling for at least ten days. It is particularly necessary to protect the finished surface from the hot sun and drying winds.

CONCRETE TENNIS COURTS INVITE OTHER PASTIMES

Some of the concrete courts constructed last year were planned and electrically lighted so as to furnish 24 hours pastime per day. In one case the court surface was ground down by using a rotary floor polishing machine, and used for dancing and roller skating. In another case the court was bordered by a curb and flooded with water, this being allowed to freeze for ice skating.

Before play and after play, a plunge in a concrete swimming pool will be refreshing and invigorating.



Our booklet, "Concrete Swimming and Wading Pools and How to Build Them," will tell you more.

Your free copy is waiting
only for your request

Your car should be housed
in a building that considers
Safety First.

*Why not a concrete
garage?*

Our booklet, "Small Concrete Garages," will give you many suggestions for making such a building fire-safe.

If interested, write
for a free copy



Portland Cement Association